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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/797,618	03/11/2004	Sven Antoin Johan Hol	081468-0308420	6457
909	7590	10/21/2005	EXAMINER	
PILLSBURY WINTHROP SHAW PITTMAN, LLP			KIM, PETER B	
P.O. BOX 10500			ART UNIT	
MCLEAN, VA 22102			PAPER NUMBER	
			2851	

DATE MAILED: 10/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/797,618

**Applicant(s)**

JOHAN HOL ET AL.

**Examiner**

Peter B. Kim

**Art Unit**

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

Applicant's arguments filed on Sept. 13, 2005 have been fully considered.

#### ***Priority***

Acknowledgment is made of applicant's claim for foreign priority. It is noted, however, that applicant has not filed a certified copy of the foreign application as required by 35 U.S.C. 119(b).

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6-15, and 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kubo (2003/0141769) in view of Ohashi (6,606,019).

Kubo discloses in Fig. 12 and 13, a device manufacturing method and a lithographic apparatus comprising a radiation system, a support structure to support a patterning device, a substrate holder, a projection system that projects the pattern beam onto substrate (Fig. 12), an actuator (125) configured to position the substrate holder with a coil arrangement (1323), magnet (1311) and cooling element (1401) which is conductive (para 0006). However, Kubo does not disclose having slits in the cooling element which reduces eddy current. Ohashi discloses an actuating mechanism with slits in the surface to increase resistance of eddy current paths (abstract). Ohashi also discloses that the slits are parallel to each other (Fig. 1, 2, 3), and slits arranged parallel or perpendicular to the induced electric field. Therefore, it would have been

Art Unit: 2851

obvious to one of ordinary skill in the art at the time of the invention to provide the slits of Ohashi to the invention of Kubo in order to increase electric resistance to eddy current as taught by Ohashi in the abstract.

Claims 1, 5, 11, 12 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kubo in view of Inoue et al. (Inoue) (2003/0048167).

Kubo discloses a device manufacturing method and a lithographic apparatus comprising a radiation system, a support structure to support a patterning device, a substrate holder, a projection system that projects the pattern beam onto substrate (Fig. 12), an actuator configured to position the substrate holder with a coil arrangement (1323), magnet (1311) and cooling element (1401). However, Kubo does not disclose having slits at an oblique angle to the induced electric field in the cooling element which reduces eddy current. Inoue discloses an actuator comprising a magnet, a coil and slits (Fig. 5A, 6A, 7A) at an oblique angle to the electric field to reduce eddy current (para 0067). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the slits of Inoue to the invention of Kubo in order to reduce eddy current as taught by Inoue in para 0067.

#### ***Remarks***

In the previous office action, claims 1-4, 6-15, and 17-21 were erroneously indicated as being rejected based on Kamata et al. (Kamata) (6,084,319) in view of Dombrovski (2003/0030339). It should have been indicated as Kamata in view of Ohashi, as applicant correctly surmised on page 8 of the response.

Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter B. Kim whose telephone number is (571) 272-2120. The examiner can normally be reached on 8:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Peter B. Kim  
Primary Examiner  
Art Unit 2851

October 18, 2005